

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED  
0579-0036  
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0001

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

UNIVERSITY OF SOUTH DAKOTA  
414 EAST CLARK STREET

VERMILLION, SD 57069

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A.  Animals Covered By The Animal Welfare Regulations	B.  Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C.  Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D.  Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E.  Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F.  TOTAL NUMBER OF ANIMALS  (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	20	0	0	20
8. Rabbits	0	0	0	0	0
9. Non-human Primates	2	0	5	0	5
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED

(b)(6), (b)(7)(c)

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0002

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SOUTH DAKOTA STATE UNIVERSITY  
ADMIN 200

BROOKINGS, SD 57007

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

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4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	11	0	11
8. Rabbits	0	0	3	36	39
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	24	0	24
11. Pigs	0	0	2	56	58
12. Other Farm Animals					
13. Other Animals	0	260	192	10	462

ASSURANCE STATEMENTS

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(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED

11-MAR-2014

(b)(6), (b)(7)(c)

OMB APPROVED  
0579-0036

Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year 2013

1. REGISTRATION NUMBER  
46-R-0002

**2. HEADQUARTERS RESEARCH FACILITY** (Name, address, and telephone number as registered with USDA, include ZIP Code)

SOUTH DAKOTA STATE UNIVERSITY  
ADMIN 200

BROOKINGS, SD 57007

[illegible]

- 1.) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2.) Each principal investigator has considered alternatives to painful procedures.
- 3.) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). **A summary of all such exceptions is attached to this annual report.** In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4.) The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)(c)

DATE SIGNED \_\_\_\_\_

11-MAR-2014

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Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year 2013

**UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

**1. REGISTRATION NUMBER**  
46-R-0003

**2. HEADQUARTERS RESEARCH FACILITY** (Name, address, and telephone number as registered with USDA, include ZIP Code)

DLORAH INC.  
5301 S. Highway 16

RAPID CITY, SD 57701

**3. REPORTING FACILITY** (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

**FACILITY LOCATIONS (Sites)**

(b)(7)(F)

**REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY** (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A.  Animals Covered By The Animal Welfare Regulations	B.  Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C.  Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D.  Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E.  Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F.  TOTAL NUMBER OF ANIMALS  (Cols. C + D + E)
4. Dogs	0	8	0	0	8
5. Cats	0	12	0	0	12
6. Guinea Pigs	0	6	0	0	6
7. Hamsters	0	2	0	0	2
8. Rabbits	0	5	0	0	5
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals	0	7	0	0	7

**ASSURANCE STATEMENTS**

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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**CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL**  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0007

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

JERRY L POMMER  
47825 279TH STREET

CANTON, SD 57013

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

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4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	195	1	0	0	1
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0008

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

HEMATECH, INC.  
4401 SOUTH TECHNOLOGY DRIVE  
  
SIOUX FALLS, SD 57106

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

HEMATECH, INC.

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

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4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	40	46	22	0	68
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

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SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED  
12-FEB-2013

(b)(6), (b)(7)(c)

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UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0009

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SANFORD RESEARCH/U S D  
2301 E. 60th Street N.

SIOUX FALLS, SD 57104

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

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4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

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(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED  
21-MAR-2013

(b)(6), (b)(7)(c)



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UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0010

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SANFORD APPLIED BIOSCIENCE LLC  
4401 S. TECHNOLOGY DRIVE

SIOUX FALLS, SD 57106

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A.  Animals Covered By The Animal Welfare Regulations	B.  Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C.  Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D.  Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E.  Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F.  TOTAL NUMBER OF ANIMALS  (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	60	28	24	0	52
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED

(b)(6), (b)(7)(c)



According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0579-0036. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB APPROVED  
0579-0036  
Exp.: 10/31/2018

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year 2013

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

1. REGISTRATION NUMBER  
46-R-0011

2. HEADQUARTERS RESEARCH FACILITY (Name, address, and telephone number as registered with USDA, include ZIP Code)

SANFORD HEALTH  
2301 E. 60th Street N.

SIOUX FALLS, SD 57104

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets, if necessary.)

FACILITY LOCATIONS (Sites)

(b)(7)(F)

SANFORD HEALTH

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets, if necessary, or use APHIS FORM 7023A.)

A.  Animals Covered By The Animal Welfare Regulations	B.  Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C.  Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D.  Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E.  Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F.  TOTAL NUMBER OF ANIMALS  (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (I.O.))

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

SIGNATURE OF C.E.O. OR I.O.

NAME AND TITLE OF C.E.O. OR I.O. (Type or Print)

DATE SIGNED  
13-MAR-2014

(b)(6), (b)(7)(c)

Column E Explanation

1. Registration Number: **46-R-0002**
2. Number of animals used in this study: **36**
3. Species of animals used in the study: **Rabbit**
4. Procedures:  
  
**Corneal epithelial cells were debrided from the cornea.**
5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results:  
  
**A topical anesthetic was used, but only provided short term analgesia; longer term or other analgesia use was determined to undermine the proper study of cell cycle proteins. Two references were provided that discussed the adverse effect of long term analgesia on these cells, Eur J Phamacol (1998) 347 105-12 and Life Sci (2001) 69 3055-71.**
6. What, if any federal regulations require this procedure? **N/A**

NOV 27 2015 ✓

#### Column E Explanation

1. Registration Number: 46-R-0002
2. Number of animals used in this study: 35
3. Species of animals used in the study: Pigs (swine)
4. Procedures: Immunized and control piglets are randomized into groups and challenged with one of three strains of swine influenza virus. Multiple nasal swabs and blood samples are taken, and piglets are observed for clinical signs of influenza. While clinical signs are expected to be mild, animals are humanely euthanized if they show signs of distress (or at the end of the experiment).
5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results: Immune response is measured by observing clinical signs; piglets are observed to help confirm the presence of the disease. Relieving pain/stress would involve providing NSAIDs and fluid therapy. Providing therapy would make it impossible to measure/compare the immune response because it may change or mask the clinical signs and immunological response. A literature search provided no evidence of alternative procedures to relieve pain or distress.
6. What, if any federal regulations require this procedure? N/A

REC 27 2008 ✓

#### Column E Explanation

1. Registration Number: 46-R-0002
2. Number of animals used in this study: 11
3. Species of animals used in the study: Pigs (swine)

4. Procedures:

Immunized and control piglets are randomized into groups and are challenged with live influenza virus. Piglets are observed for clinical signs; animals are humanely euthanized if they show signs of distress (or at the end of the experiment).

5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results:

The purpose of this study is to test influenza vaccine candidates. One need is to measure the immune response by observing clinical signs; piglets are observed to help confirm the presence of the disease. Relieving pain/stress would involve providing NSAIDs and fluid therapy. Providing therapy would make it impossible to measure/compare the immune response because it may change or mask the clinical signs and immunological response. A literature search provided no evidence of alternative procedures to relieve pain or distress.

6. What, if any federal regulations require this procedure? N/A

#### Column E Explanation

1. Registration Number: 46-R-0002
2. Number of animals used in this study: 10
3. Species of animals used in the study: Pigs (swine)
4. Procedures: Piglets are randomized into groups and at 4-5 days old, are orally immunized with 98P fimbria and/or toxoid fusion antigens. At 14 days they are challenged with STa-positive or LT-positive ETEC (*E. Coli*) to assess protective efficacy. Piglets are observed for clinical signs. Blood and fecal samples are collected; animals are humanely euthanized if they show signs of distress (or at the end of the experiment).
5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results: **The purpose of this study is to test ETEC vaccine candidates. One need is to measure the immune response by observing clinical signs; piglets are observed to help confirm the presence of the disease. Relieving pain/stress would involve providing NSAIDs and fluid therapy. Providing therapy would make it impossible to measure/compare the immune response because it may change or mask the clinical signs and immunological response. A literature search provided no evidence of alternative procedures to relieve pain or distress.**
6. What, if any federal regulations require this procedure? N/A

#### Column E Explanation

1. Registration Number: **46-R-0002**
2. Number of animals used in this study: **6**
3. Species of animals used in the study: **Wild mice**

4. Procedures:

**Wild mice are used as a lure for capturing raptors (hawks, to be radio-collared and released).**

**Because a mouse would have a flight-and-hide response, being used in this manner would cause distress in the animal.**

5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results:  
  
**Literature, such as Bloom, et al (2007) has shown that the use of live animals, such as mice is one of the most effective ways of luring a raptor.**

6. What, if any federal regulations require this procedure? **N/A**

#### Column E Explanation

1. Registration Number: **46-R-0002**
2. Number of animals used in this study: **4**
3. Species of animals used in the study: **Wild mice**

4. Procedures:

**Wild mice are used as a lure for capturing raptors (hawks, to be radio-collared and released).**

**Because a mouse would have a flight-and-hide response, being used in this manner would cause distress in the animal.**

5. Scientific justification why pain and/or distress could not be relieved. Methods or means used to determine that pain and/or distress relief would interfere with test results:

**Literature, such as Bloom, et al (2007) has shown that the use of live animals, such as mice is one of the most effective ways of luring a raptor.**

6. What, if any federal regulations require this procedure? **N/A**





## Animal Resources Center

November 5, 2013

To:  
Dr. Robert M. Gibbens  
Regional Director – Animal Care, Western Region  
USDA – APHIS  
2150 Centre Ave. Building B  
Mail Stop #3W11  
Ft. Collins, CO 80562

**ANNUAL REPORT Fiscal Year 2013**  
**Registration Number 46-R-0001; Customer ID Number 1560**

Dear Dr. Gibbens

Attached please find the 2013 Annual Report on APHIS Form 7023.

Five rhesus monkeys were trained for behavioral tasks and have been euthanized in the reporting period as described in protocol 85-03-11-14D (b) (6), (b) (7)(C). This protocol was amended to allow for up to 48 hours fasting with *ad lib* access to water at all times. The IACUC approved this exemption from normal feeding effective October 21, 2011. However, as it turned out level 4 fasting periods (48h) was rarely needed to motivate the animals with treats for training sessions.

Here the Scientific Justification for food restriction:

*The rhesus monkeys are behaviorally tested for hand movement performance using food reward tasks. The fasting procedure is required to "motivate" the animals to perform the task and reach to successfully acquire the food reward. The amended protocol was necessary to maintain the proper motivational status of the animals given the recently increased rations of food available to each animal on a normal daily basis. Water is never restricted.*

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

Institutional Official

(b) (6), (b) (7)(C)

Signature

(b) (6), (b) (7)(C)

Signature

Date:

Nov 5 / 2013

Date:

11.7.13

**Enclosures:** 2013 USDA Annual Report

NOV 14 2013